

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-19. (Canceled)

20. (Currently Amended) An apparatus for coating the outer peripheral surface of a pillar structure comprising:

a holder which holds the pillar structure in substantially vertical direction and rotates together with the held pillar structure on an axis of substantially vertical direction as a common rotating axis, wherein the holder holds the pillar structure placed thereon with one end thereof facing downward and has a pedestal rotating together with the held pillar structure on the axis of the substantially vertical direction as the common rotating axis;

a supplying and coating mechanism which supplies a coating material to the outer peripheral surface of the rotating pillar structure and coats the coating material on the outer peripheral surface;

a plate-like smoother the one longer side end portion of which is disposed at a given position with respect to the outer peripheral surface and which smoothes the coating surface of the coating material supplied to and coated on the outer peripheral surface, and

a following mechanism which drives the smoother following the outer periphery of the pedestal and/or ~~the~~ a cam so that the smoother is disposed at a given position with respect to the outer peripheral surface of the pillar structure,

wherein the holder holds the pillar structure placed thereon with one end thereof facing downward and has a pedestal rotating together with the held pillar structure on the axis of the substantially vertical direction as the common rotating axis, and

wherein the smoother has a smoothing plate and a sheet-like elastic body provided at the longer side end portion of the smoothing plate on the side of the pillar

structure, the elastic body is disposed so that it contacts with the outer peripheral surface of the pillar structure, the coating material is supplied to and coated on the outer peripheral surface through the elastic body, the coating material is delivered by a nozzle from the supplying and coating mechanism to the outer peripheral surface of the pillar structure, the coating surface is smoothed between the outer peripheral surface and the elastic body and the sheet-like elastic body has a thickness of 1-5 mm and a width of 1-10 mm.

21. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the smoother is disposed so that its longer direction substantially coincides with the central axis direction of the pillar structure and the elastic body constituting the smoother is disposed so that it contacts with the outer peripheral surface of the pillar structure between both end faces of the pillar structure.

22. (Canceled)

23. (Currently Amended) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the holder has ~~a cam~~the cam which is disposed on the side of another end of the pillar structure placed and held on the pedestal and rotates on the axis of the substantially vertical direction as the common rotating axis.

24. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 23, wherein the outer peripheral shape of the pedestal and that of the cam are substantially the same.

25. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20 which is further provided with a centering mechanism which holds the pillar structure and the pedestal and/or the cam in a given positional relation.

26. (Canceled)

27. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 23, wherein the following mechanism has first and second following rollers which are disposed at a given distance from each other and move backward and forward following the outer periphery of the cam while contacting with the outer periphery of the cam together with the supplying and coating mechanism and the smoother, and the first and second following rollers are disposed so that the angle formed by a straight line passing through the centers of the respective rollers and a tip portion of the smoother is a given angle.

28. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 27, wherein the following mechanism further has third and fourth following rollers which move backward and forward following the outer periphery of the pedestal while contacting with the outer periphery of the pedestal together with the supplying and coating smoother and the smoother and the rotating axis of the third following roller and that of the first following roller are common and the rotating axis of the fourth following roller and that of the second following roller are common.

29.-31. (Canceled)

32. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the sheet-like elastic body has a hardness of 30-80.

33. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the elastic body comprises rubber or sponge.

34. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the outer periphery of the pedestal and/or the cam comprise stainless steel or ceramics.

35. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the smoothing plate comprises stainless steel or ceramics.

36. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the shape of a section of the pillar structure cut along a plane perpendicular to the central axis of the pillar structure is circular or elliptical.

37. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the pillar structure is a honeycomb structure comprising a plurality of cells which are flow paths for fluid.

38. (Previously Presented) An apparatus for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the supplying and coating mechanism and the smoother can rotate together along the outer periphery of the pillar structure.

39. (Previously Presented) A method for coating the outer peripheral surface of a pillar structure using an apparatus for coating the outer peripheral surface of a pillar structure as recited in claim 20, wherein the method comprises the steps of

holding the pillar structure by the holder,
supplying the coating material from the supplying and coating mechanism on the outer peripheral surface of the pillar structure and coating the coating material thereon while rotating the pillar structure and the holder on the axis of nearly vertical direction as a common rotating axis, and

smoothing the coating surface of the supplied and coated coating material between the outer peripheral surface and the sheet-like elastic body.

40. (New) A method for coating the outer peripheral surface of a pillar structure according to claim 20, wherein the following mechanism includes a pair of rollers positioned on substantially the same horizontal plane and pressing against the outer peripheral surface.